BY ORDER OF THE CHIEF,
NATIONAL GUARD BUREAU

MANPOWER STANDARD 2332SO

1 DECEMBER 2004

Manpower Standard

FUELS SYSTEMS EC-130E (RIVET RIDER)

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

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This Air National Guard Manpower Standard (ANGMS) quantifies the manpower required to accomplish the tasks described in the process oriented description (POD) for varying levels of workload in the Fuel Systems EC-130E (Rivet Rider). This ANGMS applies to the Fuel Systems EC-130E, Rivet Rider mission only, at the 193rd SOW, PA. This standard applies to peacetime operations only. The Air National Guard (ANG) is the authority for the approval and publication of ANG Manpower Standards. Air Force (AF) and ANG directives contain policy and procedural guidance for the operation of the Rivet Rider function. This standard was developed in accordance with AF Instruction (AFI) 38-201, *Determining Manpower Requirements,* and AF Manual (AFMAN) 38-208, Volume 1, *Air Force Management Engineering Program (MEP) - Processes*, and AFMAN 38-208, Volume 2, *Air Force Management Engineering Program (MEP) - Quantification Tools.* Send comments and suggested improvements on AF IMT 847, *Recommendation for Change of Publication*, through channels, to ANG, Management Engineering Branch (ANG/XPME/Operating Location TN [OLTN]), 106 Briscoe Drive, McGhee Tyson ANG Base, TN 37777-6283.

1. STANDARD DATA.

1.1. Approval Date: 1 December 2004.

1.2. Man-hour Data Source: Operational Audit method (historical record and technical estimate techniques).

1.3. Standard Man-hour Equation: $Y = 149.8 + 1.380(X1) + 7.890(X2)$.

1.4. Workload Factor.

1.4.1. Titles:

1.4.1.1. X1 = A Programmed Flying Hour.

1.4.1.2. X2 = A Primary Aircraft Vehicle Authorized.

1.4.2. Definition:

1.4.2.1. X1 = Monthly number of flying hours programmed.

1.4.2.2. X2 = Average monthly primary aircraft authorized.

1.4.3. Source: USAF Program Document (PD), Volume II maintained by ANG/XPPI.

1.4.4. Points of Contact.

1.4.4.1. Functional: Lt Col Robert Hoback, ANG/LGY

1.4.4.2. Manpower: Mr. Steve Griffith, XPME, Engineering Branch

2. APPLICATION INSTRUCTIONS.

2.1. Step 1. Man-hour Equation. Apply the man-hour equation in Paragraph 1.3., to determine required man-hours.

2.2. Step 2. Man-hour Availability Factor (MAF). Divide the resulting man-hours by the appropriate MAF times the overload factor.

2.3. Step 3. Upper and Lower Extrapolation Limits:

2.3.1. $Y_U = 471.91$

2.3.2. $Y_L = 283.15$

2.4. Step 4. Air Force Specialty Codes (AFSC) Requirement. Use the Manpower Table Attachment 3 to determine required AFSCs.

3. STATEMENT OF CONDITIONS. The conditions listed below had no affect on the development of this standard: minimum response rates, minimum manpower levels, standardized crew complements, safety considerations, aircraft turn-around time, length of waiting periods, levels of backlog and hours of operation.

DANIEL JAMES III, Lieutenant General, USAF
Director, Air National Guard

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFI 38-201, *Determining Manpower Requirements*

AFMAN) 38-208, Volume 1, *Air Force Management Engineering Program (MEP)-Processes*

AFMAN 38-208, Volume 2, *Air Force Management Engineering Program (MEP) - Quantification Tools*

Abbreviations and Acronyms

AF - Air Force

AFMS - Air Force Manpower Standard

AFSC - Air Force Specialty Codes

AFTO - Air Force Technical Order

ANG - Air National Guard

ANGMS - Air National Guard Manpower Standard

FMB - Financial Management Board

LEL - Lower Explosive Level

MEP - Management Engineering Program

POD - Process Oriented Description

TCTO - Time Compliance Technical Order

UTA - Unit Training Assembly

Terms

Air National Guard Manpower Standard (ANGMS). A numbered, specialized publication that quantifies manpower requirements for a work center. Also includes approved variances. See AFI 38-201.

Man-hour. A unit of measuring work. It is equivalent to one person working at a normal pace for 60 minutes, two people working at a normal pace for 30 minutes, or a similar combination of people working at a normal pace for a period to time equal to 60 minutes.

Manpower Standard. The basic tool used to determine the minimum level of manpower required to support a function. It is a quantitative expression that represents a work center's man-hour requirements in response to varying levels of workload.

Process Oriented Description. A format that shows work center responsibilities structured for easy measurement of work categories, tasks and subtasks.

Attachment 2

PROCESS ORIENTED DESCRIPTION
FUEL SYSTEMS

Table A2.1. Listing of Functional Process.

1.	FUEL SYSTEMS ON EQUIPMENT MAINTENANCE.
1.1.	MAINTAINS FUEL SYSTEM AND COMPONENT. Inspects, troubleshoots, repairs electrical component, sub-systems and related systems for Fuel System on equipment maintenance. Maintains fuel shop records (AFTO Form 427, *G-Equipment Records, and H-Equipment Records*.)
1.1.1.	MAINTAINS UARRSI SYSTEM.
1.1.2.	MAINTAINS TANK SYSTEM.
1.1.3.	MAINTAINS FUEL DISTRIBUTION SYSTEM
1.1.4.	MAINTAINS SINGLE POINT/AERO REFUELING SYSTEM.
1.1.5.	MAINTAINS VENT SYSTEM.
1.1.6.	MAINTAINS FUEL JETTISON SYSTEM.
1.1.7.	MAINTAINS FUEL INSTRUMENT SYSTEM.
1.1.8.	MAINTAINS FOAM BAFFLE SYSTEM.
1.2.	PERFORMS INSPECTION. Performs special, phase and hourly aircraft inspection.
1.2.1.	PERFORMS SPECIAL INSPECTION.
1.2.2.	PERFORMS PHASE/HOURLY INSPECTION.
1.2.2.1.	PERFORMS AIRCRAFT MAJOR INSPECTION.
1.2.2.2.	PERFORMS AIRCRAFT FIRST MINOR INSPECTION.
1.2.2.3.	PERFORMS AIRCRAFT SECOND MINOR INSPECTION.
1.2.2.4.	PERFORMS AIRCRAFT THIRD MINOR INSPECTION.
2.	FUEL SYSTEMS OFF-EQUIPMENT MAINTENANCE.
2.1.	MAINTAINS AIRCRAFT FUEL SYSTEM AND COMPONENT. Inspects,

	troubleshoots, repairs, and replaces.
2.2.	MAINTAINS TANK SYSTEMS.
2.3.	MAINTAINS FUEL DISTRIBUTION SYSTEM.
2.4.	MAINTAINS VENT SYSTEM.
2.5.	MAINTAINS EXTERNAL FUEL TANKS.
3.	CHECKS EQUIPMENT DAILY.
3.1.	PERFORMS 514 SNIFFER CHECKS. Inspects and calibrates prior to every fuel tank entry.
3.2.	PERFORMS OXYGEN SENSOR CHECK.
3.3.	CHECK LOWER EXPLOSIVE LEVEL (LEL) CHECK.
4.	FUEL TANK MANAGEMENT.
4.1.	MONITORS FUEL TANK ENTRY.
4.2.	MANAGES FUEL TANK CERTIFICATION (NON FUEL TANK AND TANK)
4.3.	ENSURES CERTIFICATION TRAINING.
4.3.1.	ENSURES RESPIRATOR QUALIFIED.
4.3.2.	ENSURES TESTING CONFINED SPACE (ATOMSPHERE).
4.3.3.	ENSURES HAZARD COMMUNICATION.
4.3.4.	ENSURES TANK FAMARILIZATION.
4.3.5.	ENSURES CONFINED SPACE HAZARD.
4.3.6.	ENSURES RESCUE PLAN.
4.3.7.	ENSURES RECOGNIZING EXPOSURE TO CHEMICAL, SOLVENT AND FUEL.
5.	ASSISTANCE. Assists other Maintenance functions in the performance of direct labor maintenance requirement to ensure effective utilization of maintenance personnel.

6.	TIME COMPLIANCE TECHNICAL ORDER (TCTO). Performs maintenance required on/off the aircraft in accordance with applicable TCTO and completes documentation.
7.	GROUND HANDLING, SERVICING, AND RELATED TASK. Performs ground handling, servicing, and related tasks for Fuel Systems.
8.	AIRCREW DEBRIEFING. Conducts and attends aircrew debriefing. Completes appropriate documentation.
9.	HAZARDOUS WASTE PROGAM MANAGEMENT.
9.1.	PROCESSES HAZARDOUS WASTE. Identifies, labels, contains, and disposes of hazardous waste.
9.2.	MAINTAINS ACCUMULATION POINT. Maintains hazardous waste accumulation point, satellite collection area, and container.
9.3.	MAINTAINS PROTECTIVE EQUIPMENT. Inspects and maintains protective equipment.
10.	FOREIGN OBJECT DAMAGE WALK/INSPECTION. Performs walk around the maintenance complex and runway for debris.
11.	MATERIAL SAFETY DATA SHEET. Maintains all spill barrel.
12.	TECHNICAL SUBACCOUNT MAINTENANCE. Orders required technical data, receives and posts data and change to technical order file. Maintains file for serviceability.
13.	SPECIAL PLANNING OR SCHEDULING. Performs planning and scheduling tasks associated with preparation for UTA workload and mobility requirement.
13.1.	PREPARES FOR UNIT TRAINING ASSEMBLY.
13.2.	PERFORMS MOBILITY PREPARATION.
13.3.	PREPARES AND/OR PERFORMS OTHER SPECIAL PROGRAM.
14.	BENCH STOCK.
15.	TRAVEL. Performs travel associated as it relates to the Air Rescue mission for the conference, training workshop and meeting away from duty station.

16.	INDIRECT. Indirect work involves those tasks that are not readily identifiable with the work center's specific product or service. The major categories of standard indirect work are: Administers Civilian, Officer, and Enlisted Personnel; Directs Work Center Activity; Provides Administrative Support; Prepares for and Conducts/Attends Meeting; Administers Training; Manages Supplies; Maintains Equipment; and Performs Cleanup.

Attachment 3

MANPOWER TABLE

Table A3.1. Standard Manpower Table.

Work Center	Air Force Specialty Title	AFSC	Manpower Requirement								
Fuel Systems	Acft Fuels Systems	2A6X4	2	3	4						
Total			2	3	4						

Note. AFSCs may be adjusted at the discretion of the Commander.